

REMARKS

Claims 1-50 are pending in the application; the status of the claims is as follows:

Claims 1-20 and 36-50 are allowed.

Claims 21-29 and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,949,561 to Goossen et al. ("Goossen") in view of U.S. Patent No. 5,455,421 to Spears ("Spears") and in further view of U.S. Patent No. 6,414,769 B1 to Meli et al. ("Meli").

Claims 30, 31, and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Goossen in view of Spears and Meli and in further view of U.S. Patent No. 4,322,693 to Fry ("Fry").

Claims 32 and 35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Goossen in view of Spears and Meli and in further view of U.S. Patent No. 6,233,380 B1 to Ferrieu ("Ferrieu").

35 U.S.C. § 103(a) Rejections

The rejection of claims 21-29, and 33 under 35 U.S.C. § 103(a), as being unpatentable over Goossen in view of Spears and in further view of Meli, is respectfully traversed based on the following.

Claim 21 has been amended to more distinctly describe the diffractive resonant optical cavity found in original claim 21. Amended claim 21 now describes the diffractive resonant optical cavity as comprising:

a plurality of first elongate elements for absorbing a respective one of the plurality of wavelength channels and thereby creating electrical carriers, the plurality of first elongate elements forming a first diffraction grating for said respective one of the plurality of wavelength channels, and a

plurality of second elongate elements for absorbing said respective one of the plurality of wavelength channels and thereby creating electrical carriers, the plurality of second elongate elements forming a second diffraction grating for said respective one of the plurality of wavelength channels, a period of the second diffraction grating being equal to a period of the first diffraction grating, the plurality of second elongate elements being substantially perpendicular to and intersecting the plurality of first elongate elements so as to form a two-dimensional diffraction grating...

This description of what a diffractive resonant optical cavity comprises is found in allowed claim 1 and thus is not new matter. Because claim 1 is allowable, claim 21 is likewise considered allowable.

More specifically, Spears is cited as disclosing a diffractive resonant optical cavity. However, Spears does not disclose or suggest a resonant optical cavity having first and second diffraction gratings that form a two-dimensional diffraction grating, the grating formed of elongate elements that absorb a respective wavelength channel. Because the combination of Goossen, Spears, and Meli does not disclose or suggest this limitation of claim 21, the combination of Goossen, Spears, and Meli cannot render claim 21 obvious.

Claims 22-29 and 33 depend from claim 21. As claim 21 is not rendered obvious by the combination of Goossen, Spears, and Meli, claims 22-29 and 33 are nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claims 21-29, and 33 under 35 U.S.C. § 103(a) as being unpatentable over Goossen in view of Spears and in further view of Meli, be reconsidered and withdrawn.

The rejection of claims 30, 31, and 34 under 35 U.S.C. § 103(a), as being unpatentable over Goossen in view of Spears and Meli and in further view of Fry, is respectfully traversed based on the following.

The combination of Goossen, Spears, and Meli fails to render obvious the invention of claim 21. The combination of Goossen, Spears, Meli, and Fry likewise fails to render obvious the invention of claim 21. Fry, like Goossen, Spears, and Meli, fails to disclose or suggest a resonant optical cavity having first and second diffraction gratings that form a two-dimensional diffraction grating, the grating formed of elongate elements that absorb a respective wavelength channel. Because the combination of Goossen, Spears, Meli, and Fry does not disclose or suggest this limitation of claim 21, the combination of Goossen, Spears, Meli, and Fry cannot render claim 21 obvious.

Claims 30, 31, and 34 depend from claim 21. As claim 21 is not rendered obvious by the combination of Goossen, Spears, Meli, and Fry, claims 30, 31, and 34 are nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claims 30, 31, and 34 under 35 U.S.C. § 103(a) as being unpatentable over Goossen in view of Spears and Meli and in further view of Fry, be reconsidered and withdrawn.

The rejection of claims 32 and 35 under 35 U.S.C. § 103(a), as being unpatentable over Goossen in view of Spears and Meli and in further view of Ferrieu, is respectfully traversed based on the following.

The combination of Goossen, Spears, and Meli fails to render obvious the invention of claim 21. The combination of Goossen, Spears, Meli, and Ferrieu likewise fails to render obvious the invention of claim 21. Ferrieu, like Goossen, Spears, and Meli, fails to disclose or suggest a resonant optical cavity having first and second diffraction gratings that form a two-dimensional grating, the grating formed of elongate elements that absorb a respective wavelength channel. Because the combination of Goossen, Spears, Meli, and Ferrieu does not disclose or suggest this limitation of claim 21, the combination of Goossen, Spears, Meli, and Ferrieu cannot render claim 21 obvious.

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Claims 32 and 35 depend from claim 21. As claim 21 is not rendered obvious by the combination of Goossen, Spears, Meli, and Ferrieu, claims 32 and 35 are nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claims 32 and 35 under 35 U.S.C. § 103(a) as being unpatentable over Goossen in view of Spears and Meli and in further view of Ferrieu, be reconsidered and withdrawn.

CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a fee, other than the issue fee, is due, please charge this fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

Any fee required by this document other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

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Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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